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A MIRROR MAZE: NUMBERS IN NATURE

ELABORATE 1,700-SQUARE-FOOT MIRROR MAZE AT THE CENTER OF IMMERSIVE NEW SUMMER EXHIBITION

Opens Saturday, May 27

Philadelphia, PA May 2, 2017—Tickets are now on sale for *A Mirror Maze: Numbers in Nature,* The Franklin Institute's newest special exhibition designed to reveal and explain the mathematical patterns that exist in nature, the human body, and art and design—from the delicate nested spirals of a sunflower's seeds, to the ridges of a majestic mountain range, the blood vessels in our eyes, and even the layout of the Universe. The centerpiece of the exhibit is a 1,700-square-foot intricate mirror maze where guests can lose themselves in a seemingly infinite repeating pattern of floor-to-ceiling mirrors. In and around the signature mirror maze, the exhibition features an immersive film, more than a dozen hands-on activities, and 30 mathematical artifacts—each intended to illustrate how math is all around us in everyday life.

Exhibit Highlights:

Introduction to Patterns in Our World
As guests enter the exhibit, they will be greeted by lenticular images that animate imagery from nature—showing the many repeating patterns that are easily identifiable—if they know where to look! From there, an immersive presentation provides an introduction of how math surrounds us every day, illustrated with stunning footage of nature, the human body, and even art and architecture. Animated computer graphics are superimposed over the images to reveal the mathematical patterns beneath these familiar objects. Explained in-depth throughout the exhibit are four primary patterns: spirals, the Golden Ratio, Voronoi patterns and fractal branching. The film will help introduce guests to these patterns in a familiar way, as well as why they exist and how they show themselves in various facets of the natural and cultural worlds.

Building upon the examples in the presentation, an interactive area allows guests to identify patterns that surround them every day and to create numerical patterns of their own. They will be able to manipulate images of snowflakes, seashells, flowers and more—triggering the underlying geometry—as well as create a numerical sequence to understand how a pattern is generated from repeating a simple set of rules.

The Mirror Maze
When guests make their way to the centerpiece of the exhibit—the mirror maze—they are exposed to a pattern of triangles that repeat in a dizzying array of mirrors. This experience allows guests to

learn about the math that surrounds them while being inside a giant pattern. This fascinating, yet challenging, space will envelop guests within what appears to be an endless pattern—1,700 square feet of it. Guests will encounter intriguing questions and activities to further immerse themselves in the repetition, symmetry, and tessellation presented in the maze. Dead ends are scattered throughout along with a small secret room that rewards guests with bonus puzzles, imagery and artifacts.

Hands-On Discovery

Upon leaving the maze, guests will have more opportunities for hands-on activities in a final gallery.

Patterns in Nature:

- Draw patterns on a digital screen—like connecting dots to draw spirals and creating Fibonacci rectangles—and see real-world objects that show that same pattern.
- Align clear spiral frames to a series of objects from nature and the man-made world.
- Learn how fractal patterns are used to make computer-generated landscapes in movies.

Patterns in Yourself:

- Step in front of a large two-way mirror and strike various poses while a projection superimposes patterns and proportions on your body in real time.
- Look through an eyepiece to observe how blood vessels branch within your eyes.
- Compare similar patterns, like fractal branching─which appear in the human body, and in nature─by viewing a plastinated human lung and a Lichtenberg figure, a sculpture that captures a lightning strike in a piece of acrylic.
- Observe just how much symmetry—or lack thereof—is present in the human face.

Patterns in Music, Art, and Architecture:

- Compose a piece of music using symmetry: vary a single musical motive and hear your creations played back.
- Create a musical scale with mathematical proportions using a playable harp.
- Discover and compare similar patterns in architecture from varying parts of the world—from the Taj Mahal to the Beijing National Stadium—built millennia apart.

The exhibit also features an array of artifacts—Bighorn sheep antlers, honeycomb and an aluminum anthill casting—that demonstrate real examples of patterns in objects from the natural world.

A Mirror Maze: Numbers in Nature was developed by the Museum of Science and Industry in Chicago, and is presented in the Mandell Center at The Franklin Institute May 27, 2017 through September 4, 2017.

TICKET INFORMATION

A MIRROR MAZE: NUMBERS IN NATURE

May 27, 2017-September 4, 2017

DAILY; 9:30AM-5PM | Includes General Admission to The Franklin Institute

Adults $25.00; Child (3-11) $21.00

Member Tickets: Adults $5.00; Child (3-18) $4.00

NOTE TO EDITORS: Hi-resolution photographs of *A Mirror Maze: Numbers in Nature* are available at https://www.fi.edu/press-room/presskits
Password: presspass

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